National Institute of Environmental Health Sciences

Farmers' perceptions of climate change and agricultural adaptation strategies in rural Sahel

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Abstract:

Farmers in the Sahel have always been facing climatic variability at intra- and inter-annual and decadal time scales. While coping and adaptation strategies have traditionally included crop diversification, mobility, livelihood diversification, and migration, singling out climate as a direct driver of changes is not so simple. Using focus group interviews and a household survey, this study analyzes the perceptions of climate change and the strategies for coping and adaptation by sedentary farmers in the savanna zone of central Senegal. Households are aware of climate variability and identify wind and occasional excess rainfall as the most destructive climate factors. Households attribute poor livestock health, reduced crop yields and a range of other problems to climate factors, especially wind. However, when questions on land use and livelihood change are not asked directly in a climate context, households and groups assign economic, political, and social rather than climate factors as the main reasons for change. It is concluded that the communities studied have a high awareness of climate issues, but climatic narratives are likely to influence responses when questions mention climate. Change in land use and livelihood strategies is driven by adaptation to a range of factors of which climate appears not to be the most important. Implications for policy-making on agricultural and economic development will be to focus on providing flexible options rather than specific solutions to uncertain climate.

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Resource Description

Communication: ☑

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Other Communication Audience: Farmers

Early Warning System: ☑

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure : ☑

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Extreme Weather Event, Food/Water Security, Human Conflict/Displacement, Precipitation, Temperature

Extreme Weather Event: Drought

Food/Water Security: Agricultural Productivity, Food Access/Distribution, Livestock Productivity

Temperature: Extreme Cold, Extreme Heat, Fluctuations

Geographic Feature:

resource focuses on specific type of geography

Desert, Rural, Other Geographical Feature

Other Geographical Feature : Savanna

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Africa

African Region/Country: African Country

Other African Country: Senegal

Health Impact:

specification of health effect or disease related to climate change exposure

General Health Impact

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified